DOCUMENT RESUME

ED 138 974 CS 003 507

AUTHOR Beck, Isabel L.
TITLE An Analysis of Several Dimensions of Comprehension Practices from the Primary Grades Materials of a Widely Used Basal Series.
PUB DATE May 77
NOTE 14p.; Paper presented at the Annual Meeting of the International Reading Association (22nd, Miami Beach, Florida, May 2-6, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Basic Reading; *Beginning Reading; Content Analysis; Primary Education; *Reading Comprehension; *Reading Materials; Reading Programs; *Reading Research; *Textbook Content

ABSTRACT

This paper is a discursive presentation of results of an examination of comprehension instruction provided by widely used basal reader series. Focusing on selections in the first three grades of the 1976 Houghton Mifflin Reading Series, the analyses looked at the sorts of selections the students are asked to read, at the amount of text which they are expected to read independently, at the kinds of questions and activities that follow independent reading, and at how much of a reading selection is highlighted through the postreading activities. Analyses indicated that fiction accounted for a majority of the selections; that the amount of text read independently increased from the early part of first grade to the second half of third grade; that the size of silent reading units for informational selections was smaller than the size for fictional selections; that the number of questions that required information from more than one sentence in a selection increased with grade level; and that the proportion of the stories that were orally recapitulated in the postreading questions dropped from 88% in the early part of first grade to 15% at the end of third grade. Implications of the findings are discussed. (AA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED138974

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Isabel L. Beck

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

AN ANALYSIS OF SEVERAL DIMENSIONS OF COMPREHENSION PRACTICES FROM THE PRIMARY GRADES MATERIALS OF A WIDELY USED BASAL SERIES[1]

Isabel L. Beck
University of Pittsburgh

Basal reading programs are extraordinarily central to the entire elementary reading curriculum. It is well documented that they are the major instructional resources used to teach reading through the sixth grade. Indeed, these series to a large degree determine the type of reading instruction many children encounter in school.

If we are to understand what the teacher teaches when he or she teaches reading comprehension, the basal readers are a very rich source of data; but these data need to be gathered, sifted, and organized into useful information. Taken alone, the publishers' printed descriptions of the nature of instruction, their lists of objectives, and the scope and sequence charts are not adequate for documenting the nature of comprehension instruction. We have to get under the labels and inside the content itself if we are going to understand comprehension instruction beyond its surface features.

Hence, we have taken as a long term goal, a comprehensive but finely-grained analysis of the comprehension instruction provided by several widely-used basal reading series. My presentation today represents only the first move towards such an analysis; it includes a few dimensions that we think may

---

[1]Paper presented at the annual meetings of the International Reading Association, Miami, Florida; May, 1977.

CS003 587

affect comprehension from the stories of the first three grades of the 1976 Houghton Mifflin Reading Series. Houghton Mifflin was selected as being representative of widely used basal reading series; any of the other "big names" would also have been appropriate for this analysis. For today, I will present some preliminary conclusions concerning the stories students read and the suggested guidance that they receive from the teacher as they read those selections. Dimensions will include: 1) genre--what do the students read about during the first three grades? 2) size of text--how does the amount of text read independently increase over these grades? 3) kind of teacher guidance--what kinds of questions and activities follow independent reading? and 4) extent of teacher guidance--how much of a reading selection is highlighted through the post-reading activities at various places across the grades?

Turning now to genre: As expected in the "learning to read" years, fiction accounted for a majority of the selections, with a total of 87 fictional stories; of these, 48 selections were classified as realistic fiction, 37 were fanciful fiction, and 2 historical fiction selections appeared at the third grade level.

Of greater interest, was the inclusion in these early grades of many non-fiction expository selections, texts that convey factual information. There were 55 expository selections in the Houghton Mifflin first through third grade materials. Given the nature of these 55 selections, it was necessary to subdivide them into the following two categories: general information articles and reading skills development articles. Nineteen selections were classified as conveying general information. These selections presented a variety of topics, covering such subjects as famous jazz musicians, the function of the human brain, and a geological and cultural portrait of Hawaii. Since it is

unlikely that primary grades children would have previous knowledge of all, or even many of the topics presented, it would appear that Houghton Mifflin believes that these students should be "reading to learn" as well as "learning to read."

The remaining 34 expository selections were reading skills development entries. These selections were instances where concepts that are viewed as necessary for "learning to read," such as the use of quotation marks and multiple meanings of a single word, are explained in a text. By including this type of selection, Houghton Mifflin goes even beyond the notion implicit in their general information articles that students should be "reading to learn;" here, the students are expected to acquire knowledge necessary for reading by reading. They are "reading to learn to read!"

The final genre category of any magnitude in the primary grades is lyric poetry. The program developers show an unusual regard for the importance of poetry by including 72 instances in the first three grades. However, rather than having the students read the poems themselves, the program suggests that all of the poems should be read out loud by the teacher to the students. In the primary grades, the program stresses that the child learn to think of poetry as an oral literary form that expresses feelings and moods with its musical quality, not as a stimulus for reading. Reading poetry is deferred until the intermediate grades.

Thus, the genre mix in the first three grades of Houghton Mifflin reflects a philosophy that early reading material should be "well balanced." Realistic and fanciful fiction are just about equally represented in the levels. Students are expected to gain information from factual articles quite early in the formal reading experience.

After consideration, I would suspect that these informational topics may have been included so early to allay criticism sometimes heard of previously-marketed basals (of the early 1960's) for failure to provide children with reading experiences in the content areas. Some critics believe that early exposure to reading in the content areas may possibly nip-in-the-bud problems experienced by intermediate children while reading in subject matter textbooks. I would like to discuss this notion a bit further. My point may best be made by comparing closely the opening paragraphs of a fiction selection and a general information selection, both contained in the second grade materials.

The fiction story, "Ma Lien and the Magic Brush," is written in a narrative style. The opening paragraphs set the scene and state the protagonist's problem--that a poor boy in China wants to be an artist but can't afford a brush. In the first paragraphs, there is a short episode where the boy fails in an attempt to secure a brush, but in a preliminary resolution of the problem, the boy decides to keep painting with makeshift implements. So, we have a discourse that sets up, in an orderly and sequential fashion: a scene, a protagonist, a problem, and an episode with a preliminary resolution--a story structure that is very familiar.

Now let's look at the concepts within this story in terms of how familiar they are, or if unfamiliar, how easily their meanings might be induced from the text. The first paragraph reads:

> There once lived in China a poor peasant boy named Ma Lien. Day after day he worked hard in the fields so that he would have food to eat and a small hut to live in.

The concepts involved here are relatively simple and familiar to a second grader;

the boy is poor and he works hard to have food and a place to live. These concepts are universal. Only the language is special to this setting, and the meanings of words such as peasant and hut can either be inferred from the context or skipped without losing the general idea of the passage.

In contrast to this, through photographs and factual information, the general information story entitled "Hawaii" imparts information about Hawaii's land, people, and customs. Its first few lines are:

> Hawaii is a chain of mountains standing in the sea. These mountains are called islands because of deep water all round them....These mountains are made when pressure and heat build up inside the earth. Then melted rock shoots up through the earth's outer covering.

And so it goes, each sentence in the article conveying a discrete bit of factual information, with no binding thread that relates to what the child knows running from fact to fact. There is no sequencing of events in this selection to support the students' memory for the facts.

Before I speculate as to whether early exposure to content reading may alleviate later problems, it is important to point out that the major differences between fictional narratives and non-fictional expositions lie in differences in the kind of previous knowledge required to read them and in differences in the structure of the discourses.

In terms of the content as represented by the amount and familiarity of the concepts at work, "Ma Lien's" experiences and motivations are within a second grader's experience; in general, "Hawaii's" concepts are not. The episodic structure of the narrative selection is familiar; this familiarity with the discourse structure may itself lessen the demands on attention and may perhaps free students to learn a little about the quality of life in China.

In the Hawaii article, the discourse structure of presenting fact after fact, does not assist with assimilation of such concepts as chain of mountains, islands, pressure, and earth's outer covering.

For the time being, then, I think two important questions are raised, but remain unanswered. The first question deals with whether beginning readers, who certainly do not possess the kind of facility with lower-order processing skills (such as word attack and rapid word recognition) that the more experienced reader has, should be burdened with learning difficult concepts through print. The second question concerns whether later difficulties in reading subject matter texts will really be alleviated by reading unrelated superficial informational selections. Are we concerned here with whether the second grader learns the concepts about Hawaii or whether he or she has a suitable selection for practicing lower-order skills? My intuition tells me that understanding of subject matter texts in the intermediate grades will be better enhanced by indepth, extended units in the form of listening to and discussing the concepts that will eventually be read about. Just as Houghton Mifflin presents aspects of poetry by having the students listen, and reserves the reading of poetry for the intermediate grades, so perhaps should it defer content area reading. Initial concepts in content areas could be learned aurally. I am suggesting that students be given time to assimilate information that is learned aurally before the concept is elaborated upon in print. In the meantime, the student can be polishing reading skills by reading about familiar concepts through a familiar discourse structure. Another notion is that the more familiar discourse may be a good way to add to the young child's store of knowledge. For instance, the Hawaii article has a very brief description of a banyan tree.

Perhaps some knowledge of banyan trees would be better communicated through a realistic fiction story of Hawaiian children playing around and about a banyan tree.

I have just presented some information and shared my concerns about the subjects students read about. Now, let me turn to how much they read at a time. Without conducting any analysis at all, superficial observation of the Houghton Mifflin texts or any other basal materials tells us that the amount of text children are required to read at a time increases over the first three years of instruction. What I have attempted to do is to supply concrete data. From four Houghton Mifflin levels, approximately 30% of the silent reading units--those are the sections of text assigned for independent reading--were analyzed for the number of words per sentence and the number of sentences per silent reading unit.

Time does not permit me to present the data here; however, the results do allow me to make three general observations concerning the increase in amount of text read.

The first shows that Houghton Mifflin has increased the amount of text to be read in a better than random manner. The amount of text read independently rises (usually gradually) from a mean of 5, five-word sentences early in first grade to a mean of 110, nine-word sentences in the second half of third grade.

My second observation takes me back to the previously-marketed basal reading series of the early 1960's. While I do not have specific data on the size of the silent reading units there, I still feel quite safe in saying that the amount of text the Houghton Mifflin series expects children to read independently has increased greatly in comparison to what was read independently in the older basals.

Finally, having performed separate analyses on the fictional and expository selections, I found that the size of the silent reading unit for informational selections in comparable levels is much smaller than the size for the fictional unit. This difference suggests that Houghton Mifflin is sensitive, at least in this respect, to the notion that informational articles may be more difficult for the young reader.

By conducting this analysis on the length of the sentence and the number of sentences read independently at various levels in the first three grades of instruction, what I have been able to do is to capture one set of developers' intuitions about the amount of uninterrupted reading children should and/or can read at various positions in the first three years of school. This dimension will become more interesting as work expands to the analysis of other basal programs; I am eager to discover the similarities or differences in the amount of text between Houghton Mifflin and other basal series in what they expect students to be able to read at equivalent positions in their sequences. The amount of text read at a time may be considered one aspect of the complexity of the comprehension task for young readers.

Let's move now to looking at characteristics of the comprehension guidance given during each unit of silent reading. Because comprehension occurs inside the head and cannot be observed, teachers involve their students in a variety of post-reading activities, activities intended to elicit observable behaviors in order for the teacher to determine whether comprehension has ocurred. The most prevalent and, indeed, the most time honored post-reading activity is the question. The post-reading question probably serves several purposes. First, as I just mentioned, it enables the teacher to determine whether pupils have

understood the text. Second, it probably serves as a contingency for students to attend to the reading material since they quickly "pick up" that they will be asked questions about the selection. And, third, for students who may not have understood the material, the teacher's questions and their peers' answers probably provide them with the "gist" of the text and they can then begin the next portion of the story with an idea of what the previous section was about.

Questions appear in several different places in and around the stories of the primary grades levels of the Houghton Mifflin program. For today, I am concerning myself only with those sets of questions that appear at the end of each unit of silent reading. The program calls these sets of questions: Oral Reading and Comprehension Checks.

Houghton Mifflin notes that the majority of the Oral Reading and Comprehension Check questionsare literal; they mostly require recognition and recall of facts contained in the text, not interpretation of the text. We decided to take these "mostly literal" questions and break them down further into categories that would help us to crystalize their intent. Once again, our sample contained the questions following approximately 30% of the silent reading units in four Houghton Mifflin levels.

Our attempt to characterize the activities included in the Oral Reading and Comprehension Check sections resulted in the determination of five categories: 1) questions that facilitated vocabulary and language development; 2) questions that required the student to locate information in the text; 3) questions that required the student to predict outcomes; and 4) and 5) (the two categories that will be pertinent to my discussion here), 4) is questions whose answers could be located in one single sentence in the text (we called them single sentence dependent questions) and 5) questions requiring recall of information from more

than one sentence in the text (we called these multiple sentence dependent questions).

Distinction between single and multiple sentence dependent questions interested me because I believe that there is a difference in what the comprehender has to process to answer a question that requires the recall of information from one sentence, and what he or she has to process in order to answer a question requiring information retrieval from several places in the text. Information that comes from several sentences contains more propositions. Either the facts must be integrated during reading or there could be substantial memory load in the course of answering a question that depends upon information from several sentences.

In our sampling, early in the first grade in the Houghton Mifflin materials, there were twice as many single sentence dependent questions as there were multiple sentence dependent questions. By the end of first grade and through the end of second grade, the two kinds of questions came closer to being equally divided, with single sentence dependent questions still having a bit of an edge. By the end of third grade, multiple sentence dependent questions were increasing. If my hypothesis concerning the differences between the two kinds of questions is correct, I would like to see multiple sentence dependent questions increase over the grades in a greater proportion. Placing the developing reader in situations where he or she needs to retrieve information from various places in the text may help him or her to develop integration strategies. Now I do not mean to step out on a limb and imply that placing the child in such a situation will automatically cause him or her to develop integration strategies; I merely mean that the likelihood of it occurring seems greater than when the child is

seldom required to synthesize facts from textual material. Being required to retrieve a number of propositions at least puts the child in a situation where "chunking" may occur.

In addition, I believe that one of the "dangers" of being required to retrieve only a limited set of propositions from a story (as would be the case with having a preponderance of single sentence dependent questions) is to focus the child's attention on details, rather than on the main ideas of a story.

As our analysis of the kind of teacher guidance following silent reading expands to include additional basal reading series, I am planning to subdivide the category of multiple sentence dependent questions; I'd like to distinguish questions that required information from adjacent sentences from those requiring information from scattered sentences. Clearly, if my previous hypothesis is correct, a higher order of processing is required for integrating relevant information while also having to discard intervening material.

I'd like to turn now to a brief summary of how much of the independently read selections is highlighted by the post reading questions. Our method here was to read each of the post-reading questions and then to return to the story to determine those sentences in the text that we felt had to have been understood, recalled, or at least reread to arrive at the correct answer. We then calculated the percentage of the total story that this recapitulation involved.

Our results for the fictional selections are as follows: In the early part of first grade, a mean of 88% of the stories were orally recapitulated through the teacher's post-reading questioning; near the end of first grade, this dropped to 58% of the total text. By the end of second grade, the percentage highlighted fell to 38% of the total text, and at the end of third grade, the post-reading questions highlighted only 15% of the text. Once again, I remind you that these

results are based on a sampling of 30% of the silent reading units in four levels of Houghton Mifflin.

We performed the same analysis for informational stories and found that the amount of recapitulation for the content stories also decreases over the grades, but by a much smaller percentage. For example, at the end of second grade where only 38% of the text was being highlighted in the fictional selections, 62% of the informational selections was recapitulated by post-reading questions. Once again, this is probably a reflection of Houghton Mifflin's sensitivity to the higher difficulty level of informational articles for the young reader.

Compared to Chall's impressions of the previously-marketed basals where almost every line was questioned in the early stories and perhaps every page or two by the end of the primary grades, our results show that the authors of Houghton Mifflin have greatly reduced the amount of oral recapitulation of the stories. I will be very interested in determining how other current basal series compare along this dimension.

And finally, a paragraph about the skills development sequences. Virtually all programs purport to teach such comprehension skills as: drawing conclusions, noting details, following directions and so forth in their skills development sequences. At present, we are attempting to determine whether the instructional tasks in our first program represent a sensible ordering of difficulty. For instance, under the topic "drawing conclusions" we attempted to determine what properties of the stimulus materials are manipulated and changed as a child progresses in this sequence across the first three grades. From initial examination of the 64 "drawing conclusions" exercises included in the primary grades wecan find no difference between the stimulus materials and task requirements

in the "drawing conclusions" skills development sequence from first through third grade. That is, the drawing conclusion problems in the third grade do not seem any more difficult (in terms of the concepts or linguistic complexity of the stimulus materials) than those in the first grade. Therefore, as of now, I have not been able to detect any developmental sequence in this comprehension skills strand thru the 3rd grade.

Time does not permit my presentation of additional dimensions that we have begun to analyze. They include descriptions of the linguistic complexity of the text, examination of those post-reading questions that require the students to make inferences, capturing the prior knowledge demands for reading various kinds of selections and much work in sorting out the skills development sequences.

This paper has not been intended as a critique of Houghton Mifflin, but rather as an initial, tentative exploration of dimensions that possibly affect the development of students' reading comprehension. What I have not included here is some of the theoretical rationale behind some of the dimensions that have been selected. This rationale is currently being developed in work with a number of colleagues. In forthcoming work a number of these dimensions will be explicitly linked to the theoretical and research base in the area of learning from text. As we proceed towards our long term goal, other dimensions will also no doubt be identified on the basis of theory and research. We think that a well documented description of instructional practice as contained in several widely used basals is an important component for providing a better understanding than we presently have about what goes on in classrooms under the rubric of "reading comprehension instruction."